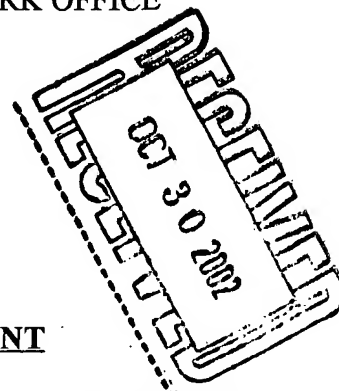




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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Patent Application  
Inventor: B. Gene Cawlfeld  
For: Megasonically Energized Liquid Interface Apparatus and Method  
Ser. No. 10/064,571  
Attorney Docket Number P-B021



**INFORMATION DISCLOSURE STATEMENT**

Pursuant to the duty of disclosure under 37 C.F.R. § 1.56, Applicant desires to bring to the attention of the Examiner known references believed to be material to the patentability of this application. This disclosure is made in accordance with 37 C.F.R. §§ 1.97 and 1.98 and § 609 of the *Manual of Patent Examining Procedures*, within three months of the electronic filing of the above-identified application.

**U.S. PATENTS & PRE-GRANT PUBLICATIONS:**

<u>Document Number</u>	<u>Publication Date</u> <u>MM-DD-YYYY</u>	<u>Patentee Name</u>
US 2001/0013355 A1	08-16-2001	Busnaina
US 2001/0014498 A1	08-16-2001	Amico et al.
US 2002/0011256 A1	01-01-2002	Bran
US 2002-0020430 A1	02-21-2002	Wirth et al.
US 2002-0026729 A1	03-07-2002	Bergman et al.
US 2002-0069895 A1	06-13-2002	Struven
US 2002-0095816 A1	07-25-2002	Bergman et al.
US 2002-0096578 A1	07-25-2002	Al-Jiboory
US 4736759	04-12-1988	Coberly et al.
US 4736760	04-12-1988	Coberly et al.
US 4869278	09-26-1989	Bran
US 4998549	03-12-1991	Bran
US 5037481	08-06-1991	Bran
US 5143103	09-01-1992	Basso et al.

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<u>Document Number</u>	<u>Publication Date</u> <u>MM-DD-YYYY</u>	<u>Patentee Name</u>
US 5286657	02-15-1994	Bran
US 5339842	08-23-1994	Bok
US 5365960	11-22-1994	Bran
US 5383484	01-24-1995	Thomas et al.
US 5533540	07-09-1996	Stanosolovich et al.
US 5579792	12-03-1996	Stanosolovich et al.
US 5625249	04-29-1997	Grant
US 5656097	08-12-1997	Olesen et al.
US 5695833	12-09-1997	Bok et al.
US 5865894	02-22-1999	Reynolds
US 5908509	06-01-1999	Olesen et al.
US 5919311	07-06-1999	Shive et al.
US 5932077	08-03-1999	Reynolds
US 5950645	09-14-1999	Olesen et al.
US 5954885	09-21-1999	Ohmi
US 5980647	11-09-1999	Buker et al.
US 5996594	12-07-1999	Roy et al.
US 5996595	12-07-1999	Olesen et al.
US 6021789	02-08-2000	Akatsu et al.
US 6039055	03-21-2000	Akatsu et al.
US 6039059	03-21-2000	Bran
US 6082373	07-04-2000	Sakurai et al.
US 6119367	09-19-2000	Kamikawa et al.
US 6124214	09-26-2000	Hembree et al.
US 6140744	10-31-2000	Bran
US 6158445	12-12-2000	Olesen et al.
US 6181051 B1	01-30-2001	Puskas
US 6199563 B1	03-13-2001	Uehara et al.

<u>Document Number</u>	<u>Publication Date MM-DD-YYYY</u>	<u>Patentee Name</u>
US 6224713 B1	05-01-2001	Hembree et al.
US 6267122 B1	07-31-2001	Guldi et al.
US 6269511 B1	08-07-2001	Andreas et al.
US 6273100 B1	08-14-2001	Andreas et al.
US 6276370 B1	08-21-2001	Fisch et al.
US 6279584 B1	08-28-2001	Huffman
US 6286231 B1	09-11-2001	Bergman et al.
US 6295998 B1	10-02-2001	Kudelka et al.
US 6295999 B1	10-02-2001	Bran
US 6311702 B1	11-06-2001	Fishkin
US 6319386 B1	11-20-2001	Reynolds
US 6333268 B1	12-25-2001	Starov et al.
US 6357142 B1	03-19-2002	Bergman et al.
US 6375752 B1	04-23-2002	Otsuki et al.
US 6378534 B1	04-30-2002	Olesen et al.

---

#### NON-PATENT PUBLICATIONS:

VERHAVERBEKE et al.; "Single-Wafer, Short Cycle Time Wet Clean Technology";

Semiconductor International; July 2002 (online electronic copy of print article)

KOHLI et al.; "Nanoscale Removal of Contaminant Particles & Films"; Vacuum Technology &

Coating; August 2001;

MEURIS et al.; "The IMEC Clean: Implementation in Advanced CMOS Manufacturing";

Semiconductor Fabtech, 11th Ed.; (c) 2000; ICG Publishing Ltd.; Hong Kong

Advertisement; "Looking for better post-CMP cleans?"; Semiconductor Fabtech, 11th Ed.;

(c) 2000; ICG Publishing Ltd.; Hong Kong

Advertisement; "Wish your wafers were cleaner?"; Semiconductor Fabtech, 11th Ed.;

(c) 2000; ICG Publishing Ltd.; Hong Kong

McCONNELL, Christopher F.; "Examining the Effects of Wafer Surface Chemistry on Particle Removal Using Direct-Displacement Isopropyl Alcohol Drying"; Reprint from Microcontamination, February 1991; Canon Communications, Inc.

No item of information contained in the information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the person signing the certification after making reasonable inquiry, no item of information contained in the information disclosure statement was known to any individual designated in § 1.56(c) more than three months prior to the filing of the information disclosure statement.

Copies of the cited references are enclosed. In keeping with the spirit of the Paperwork Reduction Act, Applicant has provided a legible copy of each reference as required by 35 CFR 1.98(a)(2) in the form of digital images encoded on a Compact Disc-Recordable (CD-R) disc. This form of "legible copy" is enumerated in 35 CFR 1.52(a)(1)(v) as one type of copy used by the Patent Office. The CD-R disc is labeled in accordance with 37 CFR 1.52 guidelines, although only one disc is provided. Duplicate discs will be provided if required.

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~~The CD-ROM was created on an IBM-PC compatible computer using the Windows 98SE~~  
operating system, and contains the following files:

<u>File Name</u>	<u>File Size (bytes)</u>	<u>Date</u>
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5143103.tiff	480,340	08-01-02 2:27p
5286657.tiff	752,248	08-01-02 2:26p
5339842.tiff	690,988	08-01-02 2:25p
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5533540.tiff	571,180	08-01-02 2:22p
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5625249.tiff	541,628	08-01-02 2:19p
5656097.tiff	2,086,460	08-01-02 2:18p
5695833.tiff	800,624	08-01-02 2:17p
5865894.tiff	537,396	08-01-02 2:15p
5908509.tiff	1,745,332	08-01-02 2:14p
5919311.tiff	698,364	08-01-02 2:11p
5932077.tiff	545,040	08-01-02 2:09p
5950645.tiff	1,711,472	08-01-02 2:08p
5954885.tiff	397,552	08-01-02 2:07p
5980647.tiff	586,728	08-01-02 2:06p
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6286231.tiff	1,252,136	08-01-02 1:50p
6295998.tiff	1,066,600	08-01-02 1:48p
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6319386.tiff	520,792	08-01-02 1:36p
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6357142.tiff	1,236,376	08-01-02 1:30p
6375752.tiff	475,812	07-05-02 1:15p
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McConnell Article.tif	546,200	08-02-02 9:54a
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Verteq Ad2.jpg	1,442,601	08-28-02 9:35a
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In the above-given list, the file for each granted U.S. patent is given a seven-digit file name reflecting the issue number of the respective patent, and each U.S. patent application publication is given an eleven-digit file name reflecting the publication number of the respective application publication. Digital color copies of the non-patent references are also included on the CD-ROM, along with black and white paper copies as a backup.

Applicant expressly reserves the right to question the relevancy and materiality of these references, in whole or in part, or in combination, subsequent to the filing of this Information Disclosure Statement.

Respectfully submitted,

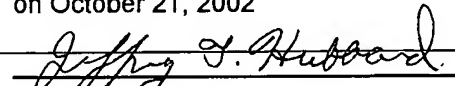


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Jeffrey T. Hubbard